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PREPARED: Friday, 30 September 2022

DUDDERY HILL, HAVERHILL

NOISE IMPACT ASSESSMENT

CONTENTS

LIST OF ATTACHMENTS

Project Ref:	AS12671	**Title:**	Duddery Hill, Haverhill
Report Ref:	AS12671.220921.NIA	**Title:**	Noise Impact Assessment
Client Name:	Jon Dingle Ltd		
Project Manager:	Michael Symmonds		
Report Author:	Will Fairman		

Clarke Saunders Acoustics
Winchester SO22 5BE

1.0 INTRODUCTION

1.1 Clarke Saunders Acoustics (CSA) has been appointed to conduct an assessment of potential sound impact associated with the proposed self-storage facility at Duddery Hill, Haverhill.

1.2 An environmental sound survey has been conducted, the data from which will be used in a contextual discussion, illustrating the possible acoustic conditions associated with external vehicular activity at the facility.

2.0 DESCRIPTION OF SITE

2.1 SURROUNDING AREA AND PRE-EXISTING SITE USE

2.1.1 The application site is situated on the northern boundary of a large industrial estate, bounded by Duddery Hill and residential properties to the north, Hollands Road to the east, industrial buildings to the south, and residential properties to the east.

2.1.2 The former use of the application site was a car showroom and workshop classed as sui generis.

2.1.3 The nearest residential dwellings to the application site are on Duddery Hill, situated to the west.

2.1.4 The appended AS12671/SP1 shows the site and surroundings.

2.2 PROPOSED SCENARIO

2.2.1 The proposed three storey building will include re-cladding of the existing building, with lateral and vertical extensions. The existing access routes will be retained, via Duddery Hill and/or Hollands Road, with modest on-site parking provision in the form of eleven parking spaces.

2.2.2 The transport consultants have confirmed that at peak times, the vehicle movements on site are anticipated to be around 12 arrivals and 10 departures an hour, with a total 140 trips between the hours of 7am and 7pm. It is also anticipated that outside of these hours, there will be a maximum of 2 to 3 vehicles visiting the site overnight. The largest vehicles that are expected to access the facility other than refuse collection vehicles, would be 7.5-tonne, 8-metre-long box vans.

2.2.3 A plan of the ground floor proposals is shown in AS12671/SP2.

3.0 SURVEY PROCEDURE AND EQUIPMENT

3.1 A survey of the ambient and background sound levels was undertaken approximately 2.5m above local ground level at the position shown in site plan AS12671/SP1. The data measured at this position is representative of the acoustic conditions experienced at the nearest noise sensitive receptors on Duddery Hill.

3.2 Measurements of consecutive 5-minute L_{Aeq}, L_{Amax}, L_{A10} and L_{A90} sound pressure levels were taken between 14:20 hours on Friday 29th July and 12:40 hours on Wednesday 3rd August 2022.

3.3 The following equipment was used during the survey:

- NTi sound level meter type XL2;
- Rion sound level calibrator type NC74.

3.4 The calibration of the sound level meter was verified before and after use. No significant calibration drift was detected.

3.5 The weather during the survey was noted on site at installation and retrieval of the meter. These observations were supplemented with historical weather data. Conditions were dry with light winds, which are suitable conditions for the measurement of environmental sound.

3.6 Measurements were made following procedures in BS 7445:1991 (ISO1996-2:1987) *Description and measurement of environmental noise Part 2- Acquisition of data pertinent to land use* and BS4142:2014 + A.1:2019 *Methods for rating and assessing industrial and commercial sound*.

4.0 SURVEY RESULTS

4.1 Figures AS12671/TH1-TH5 show the L_{Aeq}, L_{Amax}, L_{A10} and L_{A90} sound pressure levels as time histories at the monitoring position.

4.2 The background sound climate at the property is currently determined by road traffic on Duddery Hill, with a contribution from specific sound sources arising from the other industrial uses to the south of the development site.

4.3 It is not unreasonable to suggest that the sound levels during the previous operation could have been slightly higher, owing to the activity from the former car body shop.

4.4 The measured typical background and average sound levels from the monitoring positions are presented in the following table.

MONITORING PERIOD	TYPICAL BACKGROUND $L_{A90, 5MINS}$	AVERAGE $L_{Aeq, T}$	*TYPICAL L_{AFMAX}
07:00 - 23:00 hours	43 dB	52 dB	72 dB
23:00 - 07:00 hours	40 dB	48 dB	65 dB

Table 1 -Typical measured background and average sound levels [dB ref. 20 µPa]
*Typical L_{AFMax} derived from the 90th percentile of the measured L_{AFMax} dataset.

5.0 DISCUSSION

5.1 The potential sound impact from vehicular activity outside the proposed storage facility should be considered in the context of the site and pre-existing scenario.

5.2 The current sui generis use has potential to generate considerably higher levels of sound than a self-storage facility. Car workshops typically use air tools, occasional hammering and hydraulic lifts. Sound from this equipment would be much more distinctive and distinguishable against the background sound climate compared to vehicular manoeuvring, which is consistent with the existing road traffic.

5.3 The existing residents on Duddery Hill will benefit from at least 15m distance attenuation, and the lateral extension of the existing building will limit vehicle movements to the front of the development adjacent to Duddery Hill, removing the existing parking area adjacent to the garden of the nearest noise sensitive receptor.

5.4 The existing building contains two roller shutter doors on the western elevation, facing towards the nearest noise sensitive receptor, whereas the proposed building contains one roller shutter door on the eastern elevation, which will be significantly screened from the nearest noise sensitive receptor by the intervening building mass, and another on the northern elevation, facing Duddery Hill.

5.5 The peak hour conditions of 12 arrivals and 10 departures within an hour is fewer than the predicted peak conditions of the existing site of 11 arrivals and 13 departures, as confirmed by the transport consultants. Furthermore, 140 total vehicle trips between the hours of 7am and 7pm are predicted which is significantly lower than the 219 total trips predicted at the existing site. Sound from vehicular activity, including car door closures, associated with the self-storage facility is, therefore, not expected to be noticeable given the existing level of activity in the vicinity.

5.6 The arrival of a 7.5-tonne box van is not anticipated to attract attention, as the ambient sound climate in the vicinity is dominated by road traffic using Duddery Hill, a busy main road and bus route, and Hollands Road, which experiences frequent traffic from heavy goods vehicles associated with the industrial estate to the south of the site, both of which have a similar character of low frequency engine sound.

5.7 Given the typical background and average noise levels remain relatively consistent throughout the daytime and night-time periods, decreasing by only 3dB and 4dB respectively, the occasional overnight vehicle trip and associated use of the roller shutter doors and storage facility, which is expected to be a maximum of 2 to 3 vehicles, is not expected to cause an adverse impact.

5.8 This assessment indicates that sound from activity associated with the facility is very unlikely to result in the nearby residents experiencing adverse impact.

6.0 CONCLUSION

6.1 Clarke Saunders Acoustics has conducted an assessment of potential sound emissions associated with vehicular activity outside the proposed self-storage facility.

6.2 Environmental sound survey data has been used in conjunction with information provided by the transportation consultants to illustrate the anticipated effect on the surrounding sound climate.

6.3 Owing to the pre-existing commercial and industrial uses in the local area, which contribute towards the appreciable level of masking sound, sound associated with the operation of the proposed storage facility is not expected to result in adverse impact on the nearby residents.

Will Fairman MIOA
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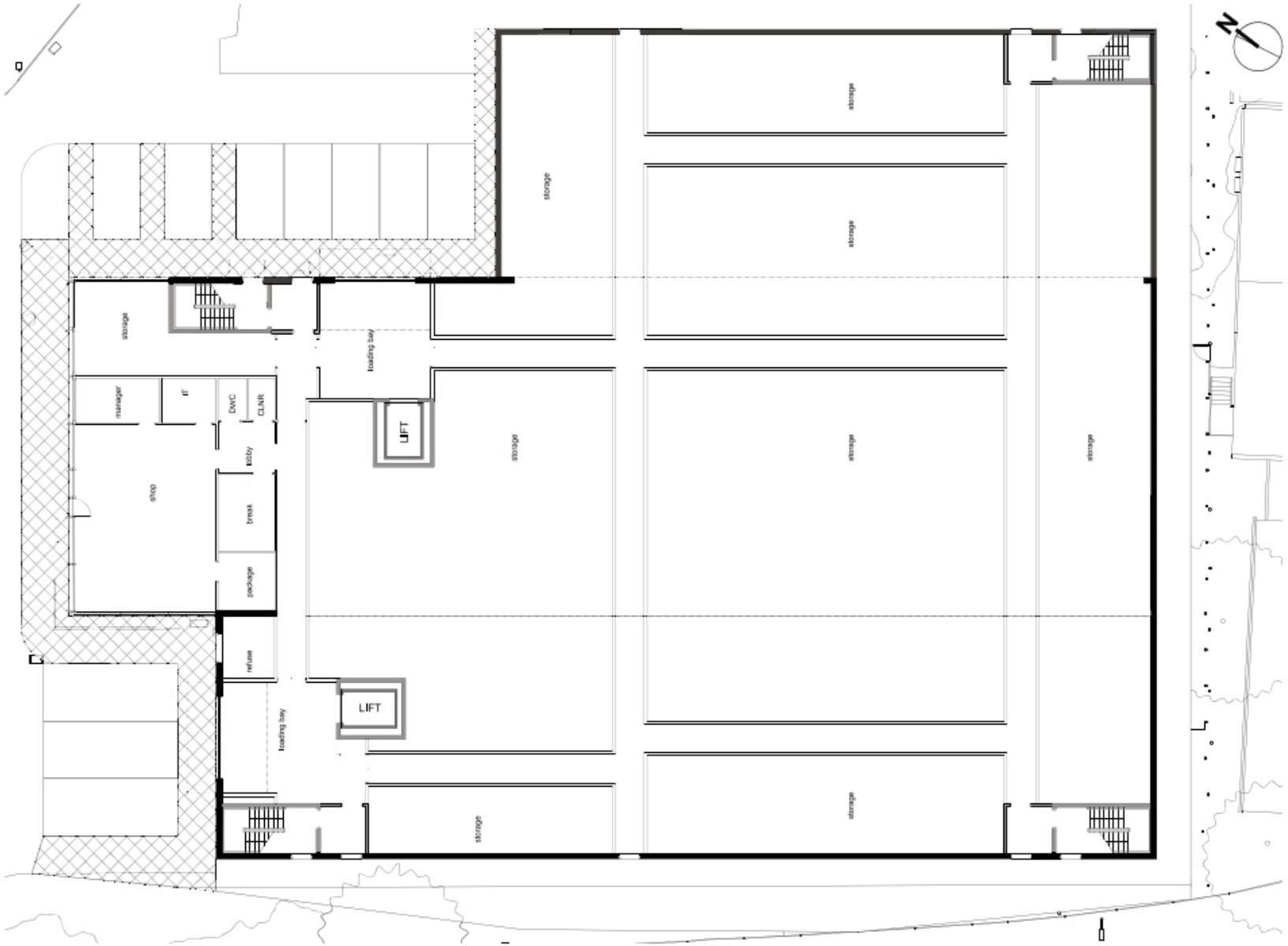
N
Receptors
Monitoring position
Google
Imagery ©2022 Google, Imagery ©2022 Bluesky, CNES / Airbus, Getmapping plc, Infoterra Ltd & Bluesky, Maxar Technologies, Map data ©2022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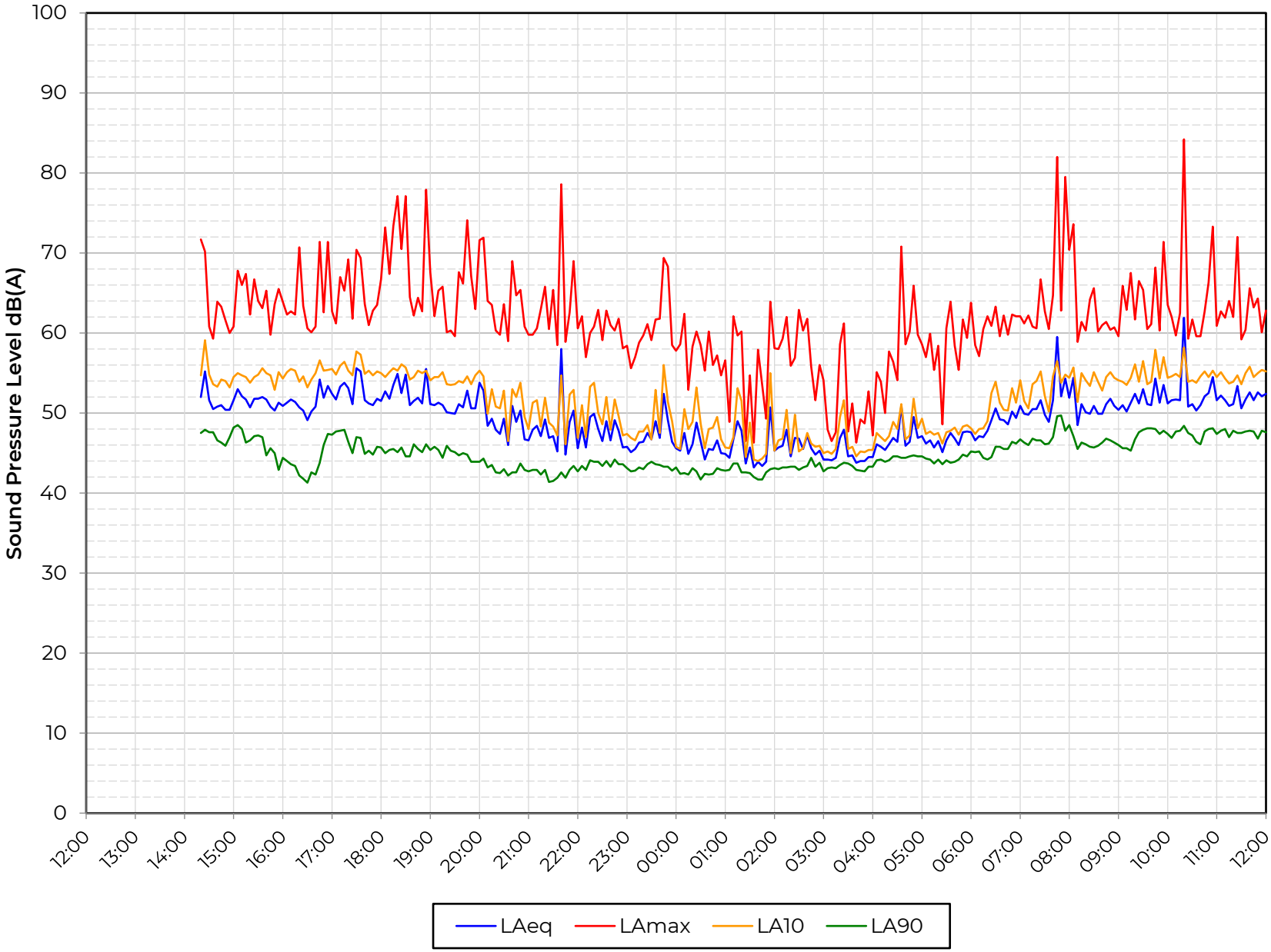
Duddery Hill, Haverhill

Position 1



Fri 29 Jul to Sat 30 Jul

Figure AS12671/TH1

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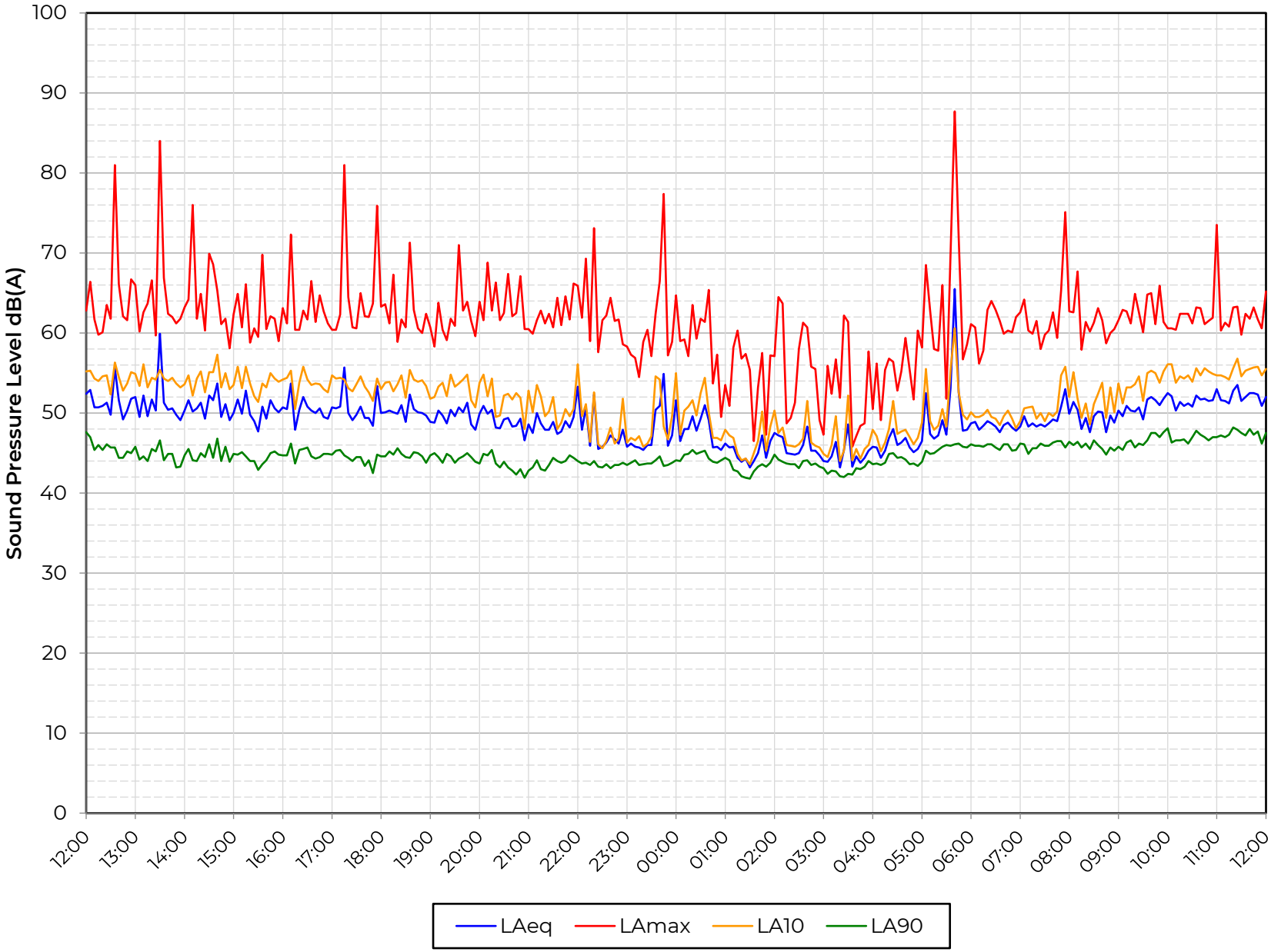
Duddery Hill, Haverhill

Position 1



Sat 30 Jul to Sun 31 Jul

Figure AS12671/TH2

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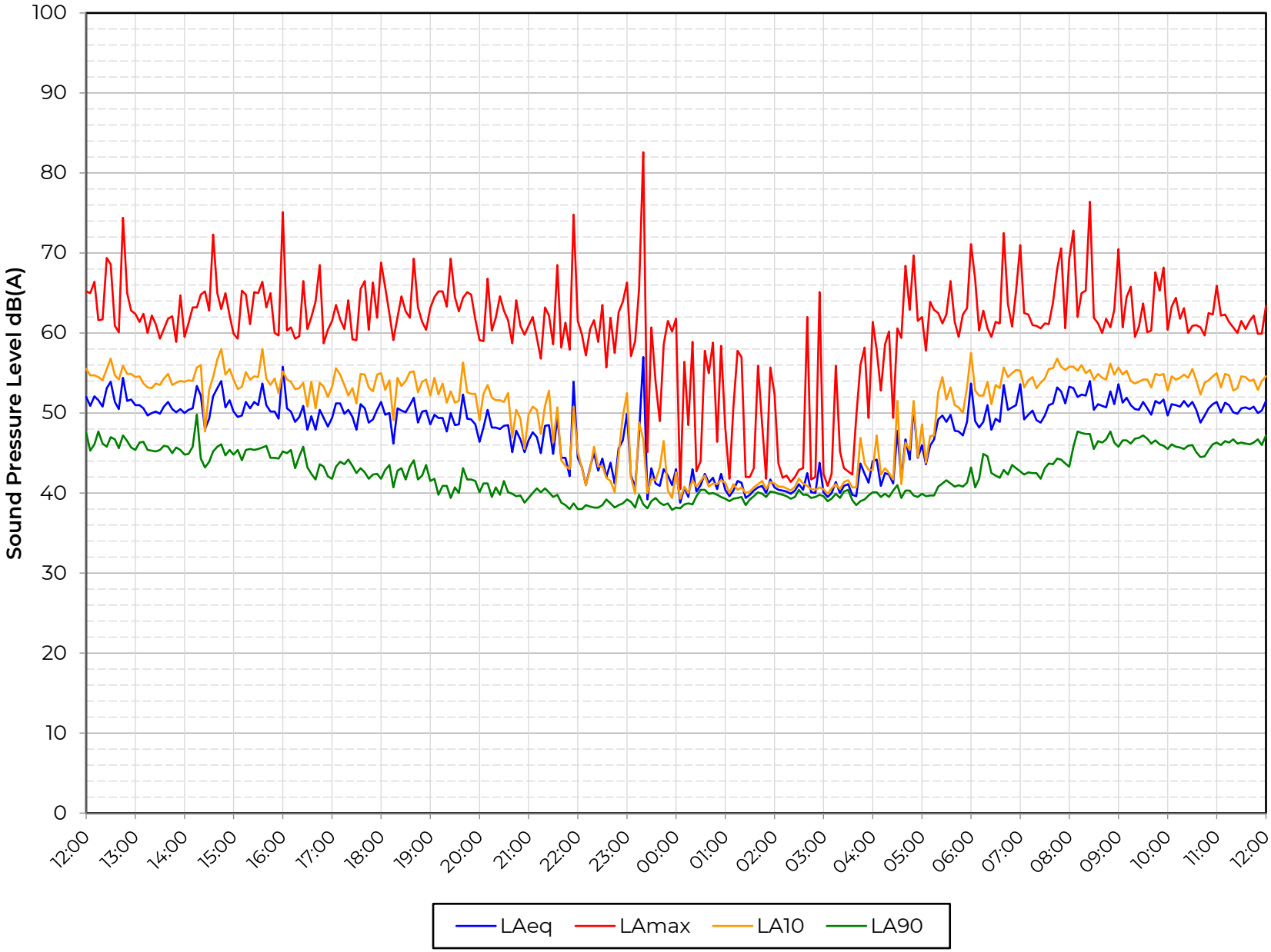
Duddery Hill, Haverhill

Position 1



Sun 31 Jul to Mon 01 Aug

Figure AS12671/TH3

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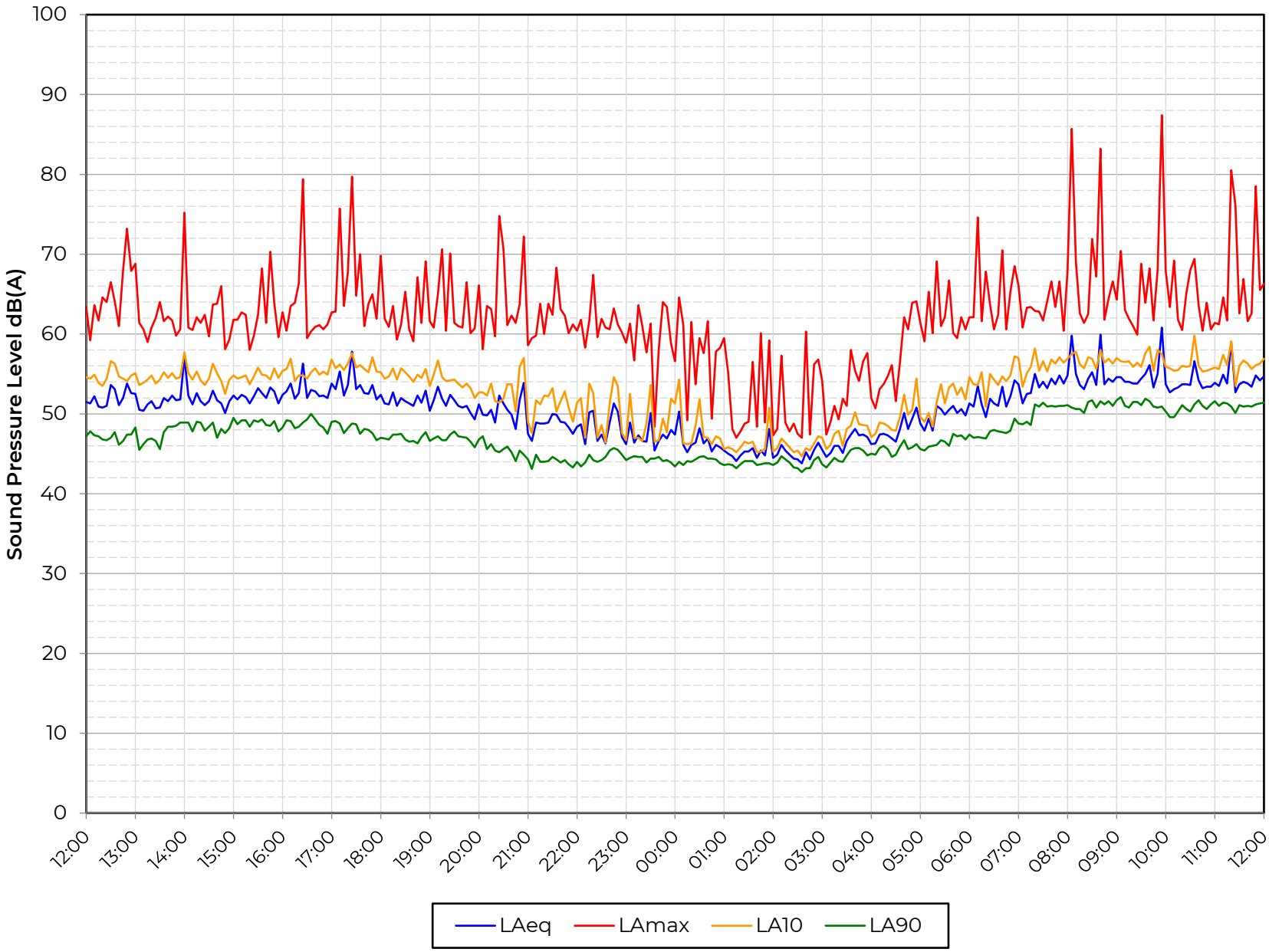
Duddery Hill, Haverhill

Position 1



Mon 01 Aug to Tue 02 Aug

Figure AS12671/TH4

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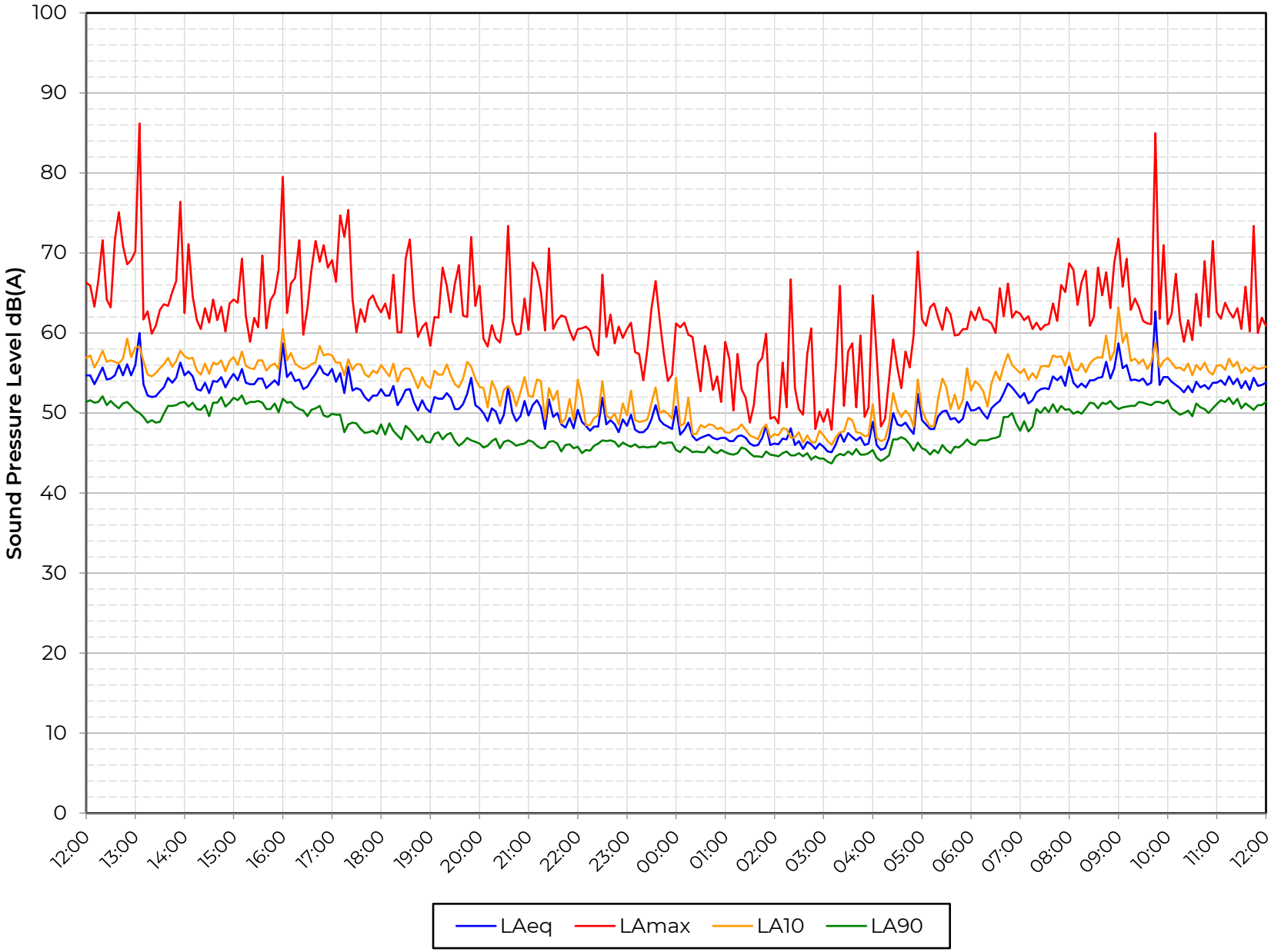
Duddery Hill, Haverhill

Position 1



Tue 02 Aug to Wed 03 Aug

Figure AS12671/TH5